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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/618,996

07/14/2003

David F. Smith

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11/26/2007

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EXAMINER

SINGH, DALZID E

ART UNIT

PAPER NUMBER

2613

MAIL DATE

DELIVERY MODE

11/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/618,996

Applicant(s)

SMITH, DAVID F.

Examiner

Dalzid Singh

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 8-13 is withdrawn in view of the newly discovered reference(s) to Spanke. Rejections based on the newly cited reference(s) follow. The indicated allowability of claims 14-20 is withdrawn in view of the 112 rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 8-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 8 recites, "...compensating for the time shift between the data signals;" There is no figure or schematic diagram provided to teach a person of ordinary skill how the time shift is compensated. Fig. 15 shows buffer (46) which provide for the time shift or delay after the deinterleaver (40). The same buffer (46) is provided prior to the interleaver (42). The claim seems to suggest that the time shift is compensated by the

buffer (46). However, the buffer (46) prior to the interleaver is the same as that of the buffer after deinterleaver (40). Therefore it is unclear which element is provided to compensate for the time shift.

Claim 14 recites, "...assigning the plurality portions in a first order to a plurality of data signals; assigning the plurality of additional portions in a second order to the plurality of data signals;..." There is no figure or schematic diagram provide to enable one of ordinary skill in the art how the signals are divided into different portions and further it is unclear how the plurality of portions are assigned.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spanke (US Patent No. 5,572,350).

Regarding claim 8 (in view of the 112 rejection), Spanke discloses method for transmitting traffic in an optical communication system, as shown in Fig. 1, comprising:

deinterleaving input traffic into a plurality of data signals (the splitter (32) is controllable to function as interleaver by switching the signal into different slots; see col. 3, lines 5-64);

transmitting each of the data streams on a separate channel (the signal is transmitted in separate channels such as 36);

inserting a known time shift between at least two of the data signals (the delay lines on the transmission produces time shifts);

receiving the data signals receives the data signals (the combiner receives the data signals); and

interleaving the data signals from the channels into output traffic corresponding to the input traffic (the data signals combined by combiner which is controllable to function as deinterleaver by switching the signal into different slots; see col. 3, lines 5-64).

Spanke discloses delays for delaying the signals and does not disclose compensating for the time delay. However, Spanke discloses controllable combiner which control signals inputted to different slots. Therefore, it would have been obvious that the combiner is controlled such that the time delay is compensated in order to provide synchronization of the signals.

Regarding claim 9, wherein compensating for the time shift includes compensating for the known time shift and compensating for chromatic dispersion between channels (it would have been obvious that the delay compensate for dispersion such as chromatic).

Regarding claim 10, as shown in Fig. 1, wherein inserting includes inserting a known time shift between at least two of the data streams after transmitting each of the data signals on a separate channel.

Regarding claim 11, wherein inserting includes inserting a known time shift between at least two of the data signals after deinterleaving and before transmitting (see Fig. 1).

Regarding claim 12, wherein the known time shift is randomly selected (it would have been obvious to an artisan of ordinary skill in the art to provide random time shift by assigning the signal to a particular transmitting line comprising of delay).

Regarding claim 13, wherein the known time shift is selected from a list of shift values and wherein a different set of shift values is selected from the list over time (it would have been obvious to an artisan of ordinary skill in the art to provide known time shift selected from list of shift values).

Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**DALZID SINGH
PRIMARY EXAMINER**

Dalzid Singh